REMARKS

In the Office Action dated October 21, 2009, the United States Patent and Trademark Office ("USPTO") has set forth a requirement for restriction under 35 U.S.C. §121 and §372, alleging that the subject matter defined by the claims of the present invention are not so linked as to form a single general inventive concept under PCT Rule 13.1:

Group I. Claims 1-61, drawn to a first method for recovering arabinose from a vegetable fiber.

Group II. Claims 62-71, 80, and 81, drawn to a method for crystallizing arabinose.

Group III. Claims 72-77, drawn to crystalline L-arabinose.

The Office Action alleges that the alleged inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 stating that, under PCT Rule 13.2, they lack the same or corresponding special technical features. The Office Action alleges that in accordance with PCT Rule 13.2, the special technical feature is a contribution over the prior art. It further alleges that the special technical feature is crystallized arabinose and that it is known in the art, referring to U.S. Patent No. 4,816,078. In addition, the Office Action alleges that PCT Rule 13.2 does not provide for multiple compositions or multiple methods of use or making within a single application. The Office Action further alleges that the additional method claims each constitute a separate group.

In order to be fully responsive to the requirement for restriction, Applicants provisionally elect, with traverse, to prosecute the subject matter of Group I, i.e., Claims 1-61, drawn to a method for recovering arabinose from a vegetable fiber. Applicants have not

abandoned the subject matter in Groups II and III and reserve the right to file a divisional application directed to the non-elected subject matter.

However, pursuant to 37 C.F.R. §§1.111 and 1.143, Applicants hereby traverse the requirement for restriction and request reconsideration thereof in view of the following remarks. A requirement for restriction presupposes an analysis of the subject application in light of the rules governing this practice, i.e., 37 C.F.R. §1.499 and PCT Rules 13.1 and 13.2. PCT Rule 13.1, first sentence, states: "The international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ('requirement of unity of invention')." (Emphasis added.) PCT Rule 13.2 states: "The expression 'technical features' shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." (Emphasis added.)

Contrary to the allegations in the Office Action, Applicants respectfully assert that Groups I, II, and III represent one single inventive concept, warranting examination in a single application. More specifically, Group I is directed to a process for recovering arabinose from vegetable fiber rich in heteropolymeric arabinose, which process includes the step of crystallizing arabinose, Group II is directed to a method of crystallizing arabinose, while Group III is directed to crystalline arabinose. Thus, all three groups contain subject matter relating to crystalline arabinose. Therefore, Groups I, II, and III are related to each other as different aspects of a single inventive concept.

The Office Action alleges that crystalline L-arabinose cannot be considered the special technical feature, alleging that it is known in the art, citing U.S. Patent No. 4,816,078. Therefore, the Office Action reasons that these claims do not include a special technical feature and cannot share a special technical feature.

Applicants respectfully submit that unity of invention is the issue at hand. The Office Action should not rely on the teachings in U.S. Patent No. 4,816,078 concerning inventive step in order to determine whether the requirement of unity of invention is satisfied under PCT Rule 13.1. Applicants should be given the opportunity to argue the merits of inventive step during prosecution. Restriction of claims would deny Applicants such an opportunity. Furthermore, Applicants respectfully submit that the IPER has not made any objection on the basis of lack of unity of invention, even though, the aforesaid patent was cited therein.

Moreover, to determine whether the claimed subject matter is disclosed in the cited prior art, the claims must be considered with all of its limitations. For example, Claim 72, which is an independent claim in Group III, recites crystalline L-arabinose based on vegetable fiber, which has a melting point higher than 164°C determined by DSC with a heating rate of 10°C/min, a melting point higher than 158°C determined by the European Pharmacopeia method and a purity of more than 99.5% on DS. The Office Action admits that U.S. Patent No. 4,816,078 does not provide the melting point and assumes that the melting point therein is the same as being claimed. However, Applicants submit a photocopy of a product off the internet which is alleged to be crystalline arabinose which has a melting point of 154-158°C. Thus, the USPTO has not made a *prima facie* case that the product in the cited reference anticipates the subject matter of Group III, for it has ignored the other characteristics in the claimed subject matter.

Moreover, it is respectfully submitted that there is no additional burden on the USPTO to conduct a search with respect to the alleged Groups, especially since Applicants elected Group I. Since crystallization of arabinose is part of the process of Group I, in conducting a search, the USPTO would need to look at claims/subclasses that relate to the

process of crystallization of arabinose and crystallized arabinose, that is, the USPTO would be conducting a search of Groups II and II, respectively, anyway. Thus, by electing Group I, there is no additional burden on the USPTO to conduct a search for Groups II and III. Moreover, the fact that a search for Group I includes a search of the subject matter of Groups II and III supports applicants' position that Groups I, II and III relate to one inventive concept.

Hence, it is respectfully submitted that the claims of Groups I, II, and III satisfy the requirements for unity of invention and should be examined in one application. Applicants respectfully urge the USPTO to reconsider and withdraw the requirement for restriction and provide an action on the merits with respect to all of the claims.

The Office Action also requires Applicants to elect a single species. The Office Action also requires Applicants to identify the claims readable on the elected species. In full compliance thereto, but with traverse, Applicants provisionally elect, with traverse, the following species: the optional step of neutralization to not be performed and the optional step of fractionization to be performed with one or more fractions not being enriched in poly-, oligo- and/or disaccharides (Species (A)) and the source of the vegetable rich fiber being exudate gum, wherein the exudate gum is gum arabic (Species B). Moreover, Claims 1-5, 10-33 and 38-61 read on the elected species.

With respect to the species election, Applicants reiterate the comments hereinabove, the contents of which are incorporated by reference. Moreover, it is respectfully submitted that the USPTO has not met its burden. The USPTO alleges that for Species A, the additional steps to the basic method adds step of doing an action (e.g., neutralization or fractionation) that is not part of the basic method. The basic method can be practiced without

neutralization or fractionation. Hence, the Office Action alleges there is no specific technical feature of the optional steps within the steps of the basic method.

Applicants respectfully submit that the species are not patentably distinct. The basic steps are generic. The technical feature of Species A all have in common the basic steps, as fractionation and neutralization are optional. Thus, steps (a), (c) and (e) of Claim 1 are required in all of the claims, and they relate to a single inventive concept of recovering arabinose, as recited.

Further, with respect to Species B, the Office Action alleges that the source of vegetable fibers have different physical structures and biomedical content and properties. Although this may be true, this is totally irrelevant, for this does not affect the general inventive concept of recovering arabinose from step (a), (c) and (e).

Thus, all of the species are related to methods for the recovery of arabinose. Thus, they are all linked together to form a single inventive concept. Moreover, with respect to Group I, in the process steps, the identity of the products that may be recovered along with the arabinose and/or the additional of optional steps have no effect on the burden by the USPTO in conducting a search, as a search for the process of recovering arabinose would uncover any art where an impurity, e.g., galactose, is also present. Moreover, with respect to the optional steps of neutralization and fractionation, it should be noted that the process steps recited in Group I are generic thereto: thus a search for the subject matter of Group I without the optional steps would necessarily uncover the species elected with respect to these process steps and would uncover processes which would include the optional steps. Thus, there should be no additional burden on the USPTO to conduct a search, regardless of the species chosen. Therefore, it is respectfully submitted that the Election Requirement should be withdrawn.

It is vital to all applicants that the Restriction Requirements and Election of Species Requirement issue only with the proper statutory authorization, because patents issuing on divisional applications which are filed to prosecute claims that the Examiner held to be independent and distinct can be vulnerable to legal challenges alleging double patenting. The third sentence of 35 U.S.C. § 121, which states that a patent issuing on a parent application "shall not be used as a reference" against a divisional application or a patent issued thereon, does not provide comfort to applicants against such allegations. The Court of Appeals for the Federal Circuit has declined to hold that 35 U.S.C. §121 protects a patentee from an allegation of same-invention double patenting, Studiengesellschaft Kohle mbH v. Northern Petrochemical Co., 784 F.2d 351, 355, 228 U.S.P.Q. 837, 840 (Fed. Cir. 1986); and in Gerber Garment Technology Inc. v. Lectra Systems Inc., 916 F.2d 683, 16 U.S.P.Q 2d 1436 (Fed. Cir. 1990), that court held that §121 does not insulate a patentee from an allegation of "obviousness-type" double patenting, and in fact affirmed the invalidation on double patenting grounds of a patent that had issued from a divisional application filed following a restriction requirement. Furthermore, it is far from clear that the step of filing a terminal disclaimer is available to resolve a double patenting issue that arises after the issuance of a patent on the divisional application.

All these considerations indicate that the imposition of a Restriction Requirement and/or an Election of Species Requirement with inadequate authority can lead to situations in which Applicants legitimate patent rights are exposed to uncertainty and even extinguished. Accordingly, to protect a patentee's rights and to serve the public's interest in the legitimacy of issued patents, Applicants respectfully urge the Examiner not to require restriction or election of species in cases such as the present application wherein various aspects of a unitary invention are claimed.

In addition, the Courts have recognized the advantages to the public interest to permit patentees to claim all aspects of their invention, as the applicants have done herein, so as to encourage the patentees to make a more detailed disclosure of all aspects of their invention. The CCPA has observed:

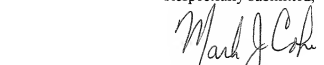
> We believe that the constitutional purpose of the patent system is promoted by encouraging applicants to claim, and therefore to describe in the manner required by 35 U.S.C. § 112 all aspects of what they regard as their invention, regardless of the number of statutory classes involved.

In re Kuehl, 456, F.2d 658, 666, 177 U.S.P.Q. 250, (CCPA 1973).

Furthermore, Applicants respectfully request that in view of increased Official Fees and the potential limitation of Applicants financial resources, a practice which arbitrarily imposes a Restriction or Election of Species requirement may become prohibitive, and thereby contravenes the constitutional intent to promote and encourage the progress of science and the useful arts.

In view of the foregoing comments, Applicants respectfully urge the Examiner to reconsider and withdraw the Restriction and Election of Species Requirement and provide an action on the merits of all of the claimed subject matter.

Respectfully submitted,



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A Manufacturer Representative Company

Over 200 Product Shipped World Wide

Phenazepam
L-Aradinose
Xylitol

Food and Food Additives

Product Name: **L-Aradinose** 85usd/Kg FOB Qingdao port, China

Alias names: L (+)-gum aldose, L (+)-pentose, pectinose
English names: L-Arabinose, L (+)-Arabinosc, L (+)-pectinose
L (+) Pectinsugar, L (+)-Gum sugar
Japanese name: L-アラビノース
Molecular formula: C5H10O5
Molecular weight: 150.13

CA registry number: 5328-37-0; 87-72-9; custom HS number; 29400000; International FEMA number: 3255

Property: white crystal powder, odorless; specific gravity: 1.585; melting point: 154℃-158℃; specific optical rotation: [α]20D (C=5, H2O, 24h) 100° ~ +104° Boiling point : 160℃. It is soluble in water, slightly soluble in ethanol, insoluble in ether, methanol and acetone. One portion of L- arabinose can be dissolved in 48 portions of 90% ethanol at 12℃.

L-arabinose is an aldopentose, a sweet material with no energy naturally synthesized. It can inhibit blood glucose elevation induced by sucrose intake, so it can inhibit obesity, prevent hyperglycemia .L-arabinose can be adopted as a pharmaceutical intermediate, or used for preparation of bacterial medium and synthesis of essence in biological industry.

Quality specification

Categories Item	For food	Solution *
Properties	White crystal powder	Yellowish or deep brown solution
Content of L- arabinose	≥99.0%	≥30%
Moisture content	≤1.0%	——
Ash content	≤0.1%	< 0.1%
Melting point	154-158℃	——
Specific rotation[α]20D (C=5 , H2O , 24h)	+100° ~ +104°	——
Refraction (abbe refractometer)	70±3%	
Heavy metal content	≤10 ppm	≤0.0010
Arsenic content	≤2 ppm	≤0.0002
Chlorine content	≤10 ppm	≤0.0010
Sulfate content	≤10 ppm	≤0.0500
PH value	——	2.4—5.0

* Inner control parameters.
Applicable range: various foods, except foods for infants or young children. The daily recommended dose is 3% -6% of sucrose dose.
Package specifications:
Crystal product: 6g/bag, 120g/bag, 1kg/bag, 25kg/carton barrel.
Liquid product: 30kg/plastic barrel, 200kg/plastic barrel.

Medical Material and Pharmaceutical Intermediates

Product Name: **L-Aradinose** 100usd/Kg FOB Qingdao port, China

Alias names: L (+)-gum aldose, L (+)-pentose, pectinose
English names: L-Arabinose, L (+)-Arabinosc, L (+)-pectinose, L (+) Pectinsugar, L (+)-Gum sugar
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L-arabinose is an aldopentose, a sweet material with no energy naturally synthesized. It can inhibit blood glucose elevation induced by sucrose intake, so it can inhibit obesity, prevent and treat hyperglycemia correlated diseases. L-arabinose can be used for preparation of bacterial medium in biological industry.

Categories	For drug
Item	
Properties	White crystal powder
Content of L- arabinose	≥99.5%
Moisture content	≤0.5%
Ash content	≤0.05%
Melting point	154℃-158℃
Specific rotation	
[α]20D (C=5, H2O, 24h)	100°-104°
Refraction (abbe refractometer)	
Heavy metal content	≤10ppm*
Arsenic content	≤0.2ppm*
Chlorine content	≤10ppm*
Sulfate content	≤10ppm*
pH value	——

* Inner control parameters.

Applicable range: various foods, except foods for infants or young children. The daily recommended dose is 3% -6% of sucrose dose.

Package specifications:

Crystal product: 6g/bag, 120g/bag, 1kg/bag, 25kg/carton barrel.

Liquid product: 30kg/plastic barrel, 200kg/plastic barrel.